

City of San Diego Metropolitan Wastewater Dept.

TEACHER LESSON PLAN

Lesson 2: Reclaimed Water

Purpose:

To teach students about water reclamation for non-drinking purposes as one way of addressing California's water crisis.

Lesson in brief:

Students will learn that water reclamation is a water management tool that is being done to reduce the amount of water California must imports.

Procedure:

Ask the students:

1. What type of climate does San Diego have?
Semi-arid desert
2. Do you know where the water in your homes comes from?
Answers will vary and should lead into discussion
3. Why do we need to conserve water?
Answers will vary and should lead into discussion

Discussion:

Approximately 90 percent of our drinkable water supply is imported from Northern California and the Colorado River. This imported water is limited and its future reliability is uncertain. Arizona and Nevada are using more water from the River. In addition, political and environmental concerns continue to limit the amount of water imported from Northern California.

To meet future demands for water, the City of San Diego has implemented many innovative water management strategies. One of those strategies is to increase the use of reclaimed water in the region. Water reclamation provides an additional water source to San Diego to decrease its uses of drinking or "potable" water. Wastewater from some of our homes and businesses is treated at the North City Water Reclamation Plant or the South Bay Water Reclamation Plant where it is made safe for "non-potable" uses such as irrigation and some industrial applications (cooling towers, manufacturing, etc).

The North City Water Reclamation Plant is the first large-scale water reclamation plant in San Diego's history. This facility can treat up to 30 MGD (million gallons per day) of wastewater using the latest technology. (It currently treats about 25 MGD.)

With the population growing as it is, water conservation and management is the only sure way to guarantee water for future generations.

Ask the students:

1. What is reclaimed water?
Reclaimed water is wastewater that is cleaned and used for non-potable purposes.
2. Why use it?
It reduces our dependence on imported water and guarantees water for future generations

3. Who can use reclaimed water?

Businesses, Homeowner Associations, Large Housing Tracts, Parks, Transportation Department, Industries; Golf Courses

4. Where would they use it?

Landscaping for office buildings and residential housing common areas; park grounds and ornamental fountains, athletic fields; interstate or highway medians; manufacturing and cooling towers

5. How will they conserve water?

Examples:

Don't leave the water on when we brush our teeth;

Take shorter showers;

Wash clothes and dishes only when the machines are full;

Water lawns only at night